PAT-NO: JP02002245947A

DOCUMENT-IDENTIFIER: JP 2002245947 A

TITLE: SUBSTRATE WITH THIN LINE,
MANUFACTURING METHOD THEREOF,
                              ELECTRON SOURCE SUBSTRATE AND IMAGE

DISPLAY DEVICE

PUBN-DATE: August 30, 2002

INVENTOR-INFORMATION:
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APPL-NO: JP2001356554

APPL-DATE: November 21, 2001

PRIORITY-DATA: 2000382331 (December 15, 2000)

INT-CL (IPC):   H01J029/04, H01J001/316 , H01J009/02 ,
H01J031/12

ABSTRACT:

    PROBLEM TO BE SOLVED: To suppress end peeling peculiar
to the formation of a
thin line by an exposure and development method.

    SOLUTION: In a substrate with thin lines, the thin lines
are formed by a
thin line forming process including a step of irradiating

light, from above the
substrate, to a given region in a photosensitive material applied onto the
substrate and a developing step subsequent to the light irradiating step, the
thin lines have a narrow portion at a longitudinal end thereof, and the narrow
portion has a smaller width shape than a portion adjacent to the narrow
portion.

L Number	Hits	Search Text	DB	Time stamp
1	44788	(wire wiring) near2 line	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:40
2	51	(((wire wiring) near2 line) near5 end) with (smaller small narrower narrowing taper$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:35
3	4396	((wire wiring) near2 line) with end	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:40
5	445553	(electron adj source display liquid adj crystal) near2 (substrate device apparatus)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:42
6	16	((((wire wiring) near2 line) with end) with (narrow$3 small$3 decreas$3 less taper$3)) and ((electron adj source display liquid adj crystal) near2 (substrate device apparatus))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:42
4	198	(((wire wiring) near2 line) with end) with (narrow$3 small$3 decreas$3 less taper$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:54
7	159	((electron adj source display liquid adj crystal) near2 (substrate device apparatus)) and (((wire wiring) near2 line) same (narrow$3 taper$3))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:55
9	152	((((electron adj source display liquid adj crystal) near2 (substrate device apparatus)) and (((wire wiring) near2 line) same (narrow$3 taper$3))) not (((((wire wiring) near2 line) with end) with (narrow$3 small$3 decreas$3 less taper$3)) and ((electron adj source display liquid adj crystal) near2 (substrate device apparatus)))) not ((((wire wiring) near2 line) with end) with (narrow$3 small$3 decreas$3 less taper$3))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:56
8	152	(((electron adj source display liquid adj crystal) near2 (substrate device apparatus)) and (((wire wiring) near2 line) same (narrow$3 taper$3))) not (((((wire wiring) near2 line) with end) with (narrow$3 small$3 decreas$3 less taper$3)) and ((electron adj source display liquid adj crystal) near2 (substrate device apparatus)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 17:18
10	23	photoresist same (heat$3 bak$3) same ((wire wiring) near2 line)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 17:20
–	305	UDA-YOSHIMII-.in. SHIWATA-KAZUYA-.in. KUBO-SHINSAKU-.in. watanabe-yasuyuki-.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 13:59
–	130421	(line circuit wire wiring) with (narrow$3 small$3 less decreas$3) with (end width portion)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:49
–	674315	resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:03
–	586	electron adj source adj substrate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:04

–		79089	image adj display	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:04
–		3901	((line circuit wire wiring) with (narrow$3 small$3 less decreas$3) with (end width portion)) same (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:06
–		5703	(line) with (narrow$3 small$3 less decreas$3) with (end portion) with width	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:27
–		234	((line) with (narrow$3 small$3 less decreas$3) with (end portion) with width) same (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:06
–		0	(((line) with (narrow$3 small$3 less decreas$3) with (end portion) with width) with (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))) same (electron adj source adj substrate) same (image adj display)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:07
–		2	(((line) with (narrow$3 small$3 less decreas$3) with (end portion) with width) with (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))) and (electron adj source adj substrate) and (image adj display)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:07
–		3	(((line) with (narrow$3 small$3 less decreas$3) with (end portion) with width) same (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))) and (electron adj source adj substrate) and (image adj display)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:11
–		148	((line) with (narrow$3 small$3 less decreas$3) with (end portion) with width) with (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:11
–		10	(((line) with (narrow$3 small$3 less decreas$3) with (end portion) with width) same (resist photoresist photo-resist photosensitive photo-sensitive (sensitive near (light radiation energy photo)))) and ((electron adj source adj substrate) (image adj display))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:25
–		307	(line) with ((narrow$3 small$3 less decreas$3) near3 width) with (end near2 width)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 14:36
–		137357	(circuit wire wiring) near2 line	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:50
–		638935	end near2 portion	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:51
–		4	((circuit wire wiring) near2 line) with (end near2 portion) with narrow$3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:53

—	8	((circuit wire wiring) near2 line) with (end near2 portion) with taper$3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:53
—	8	(((circuit wire wiring) near2 line) with (end near2 portion) with taper$3) not (((circuit wire wiring) near2 line) with (end near2 portion) with narrow$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:57
—	5	((line) with ((narrow$3 small$3 less decreas$3) near3 width) with (end near2 width)) and ((electron adj source adj substrate) (image adj display))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 15:58
—	30	((line) with ((narrow$3 small$3 less decreas$3) near3 width) with (end near2 width)) and (distal chamfer$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:02
—	44788	(wire wiring) near2 line	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:14
—	93	((wire wiring) near2 line) same width same end same (narrow$3 taper$3 decreas$3 small$2 less)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:08
—	44788	(wire wiring) near2 line	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:32
—	2387	((wire wiring) near2 line) near5 end	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/06/23 16:21